

## Assignment 6

- ① Write a program to calculate sum of first  $N$  natural numbers.
- ② Write a program to calculate sum of first  $N$  even natural numbers.
- ③ Write a program to calculate sum of first  $N$  odd natural numbers.
- ④ Write a program to calculate sum of squares of first  $N$  natural numbers.
- ⑤ Write a program to calculate sum of cubes of first  $N$  natural numbers.
- ⑥ Write a program to calculate factorial of a number.
- ⑦ Write a program to count digits in a given number.
- ⑧ Write a program to check whether a given number is a prime number or not.
- ⑨ Write a program to calculate LCM of two numbers.
- ⑩ Write a program to reverse a given number.

```
① #include <stdio.h>
   int main()
   {
       int i, n, sum = 0;

       printf("Enter a natural number: ");
       scanf("%d", &n);

       for(int i = 1; i <= n; i++)
       {
           sum = sum + i;
       }

       printf("sum of first n natural number: %d\n", sum);
       return 0;
   }
```

②

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int n, s=0, i=2;
```

```
    printf("Enter a natural number:");
```

```
    scanf("%d", &n);
```

```
    while (i <= n*2)
```

```
{
```

```
    s = s + i;
```

```
    i = i + 2;
```

```
}
```

```
    printf("Sum of first n even number %d", s);
```

```
    return 0;
```

```
}
```

③

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int n, s=0, i=2;
```

```
    printf("Enter a natural number");
```

```
    scanf("%d", &n);
```

```
    while (i <= n*2)
```

```
{
```

```
    s = s + i;
```

```
    i = i + 2;
```

```
}
```

```
    printf("Sum of first n odd number %d", s);
```

```
    return 0;
```

```
}
```

④

```
#include <stdio.h>
int main()
{
    int i = 1, n, sum = 0;
    printf("Enter n value :");
    scanf("%d", &n);

    while (i <= n)
    {
        sum += (i*i);
        i++;
    }
    printf("Sum of square of first %d natural numbers = %d", n, sum);
    return 0;
}
```

⑤

```
#include <stdio.h>
int main()
{
    int i = 1, n, sum = 0;
    printf("Enter n values:");
    scanf("%d", &n);
    while (i <= n)
    {
        sum += (i*i*i);
        i++;
    }
    printf("Sum of square of first %d natural number = %d",
    sum);
    return 0;
}
```

⑥ #include <stdio.h>

int main()

{

int n, i=1, f=1;

printf("Enter the number \n");

scanf("%d", &n);

do

{

f = f \* i;

i++;

}

while(i <= n);

printf("The factorial of a number %d is %d \n", n, f);

return 0;

}

⑦ #include <stdio.h>

int main()

{

int n, count = 0;

printf("Enter a number");

scanf("%d", &n);

while(n != 0)

{

n = n / 10;

count++;

}

printf("The count digit number is : %d", count);

return 0;

}

⑧

```
#include <stdio.h>
int main()
{
    int num, i, count = 0;
    printf("Enter a number: ");
    scanf("%d", &num);
    for (i = 2; i <= num/2; i++)
    {
        if (num % i == 0)
        {
            count++;
        }
    }
    if (count == 0 && num != 1)
        printf("%d is a prime number", num);
    else
        printf("%d is not a prime number", num);
    return 0;
}
```

⑨

```
#include <stdio.h>
int main()
{
    int n1, n2, LCM;
    printf("Enter two number: ");
    scanf("%d %d", &n1, &n2);
    LCM = (n1 > n2) ? n1 : n2;
    while (n1)
    {
        if (LCM % n1 == 0 && LCM % n2 == 0)
        {
            printf("The LCM of %d and %d is %d", n1, n2, LCM);
            break;
        }
        LCM++;
    }
}
```

⑩ #include <stdio.h>

int main()

{

int n, reverse = 0, s;

printf("Enter any number:");

scanf("%d", &n);

while (n > 0)

{

s = n % 10;

reverse = reverse \* 10 + s;

n = n / 10;

}

printf("reverse number is: %d", reverse);

return 0;